Title (en)

Control system and method for engine valves

Title (de)

Ventilsteuervorrichtung für eine Brennkraftmaschine und Verfahren

Title (fr)

Système de commande et procédé pour soupapes de moteur à combustion interne

Publication

EP 0659984 B1 19980812 (EN)

Application

EP 94308875 A 19941130

Priority

US 17300993 A 19931227

Abstract (en)

[origin: US5367990A] A variable engine valve control system and method of operation thereof wherein each of the reciprocating engine valves is hydraulically or electrically controlled and can vary its lift schedule for various engine operating conditions. During part load operation of the engine, the intake valve is opened and the exhaust valve is closed during the exhaust stroke, prior to a piston's top dead center position, so that the intake port receives exhaust gas, which is then returned to the cylinder during the intake stroke to eliminate the need for an external exhaust gas recirculation system and to improve fuel evaporation into the intake air. Further, during part load, the intake valve is closed before the end of the intake stroke and the intake air is heated by a heat exchanger prior to entry into the cylinder to eliminate the need for air throttling without compromising the compression ratio and ignition characteristics.

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IPC 8 full level

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CPC (source: EP US)

F01L 9/10 (2021.01 - EP US); **F02B 29/00** (2013.01 - EP US); **F02D 13/0207** (2013.01 - EP US); **F02D 13/0215** (2013.01 - EP US); **F02M 26/01** (2016.02 - EP US); F02D 13/0253 (2013.01 - EP US); F02D 13/0261 (2013.01 - EP US); F02D 2013/0292 (2013.01 - EP US); Y02T 10/12 (2013.01 - EP US)

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